F I G. 1

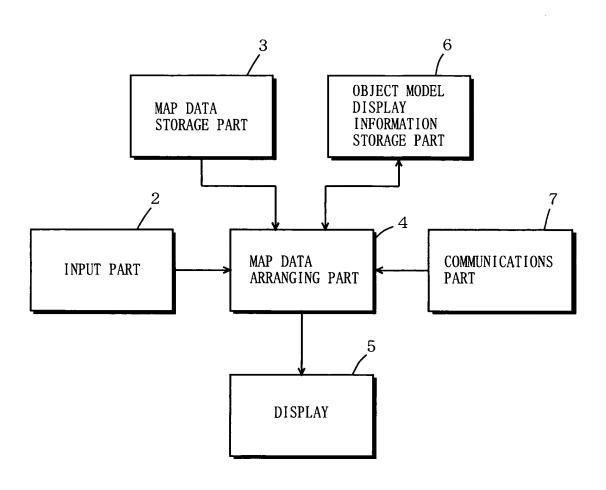
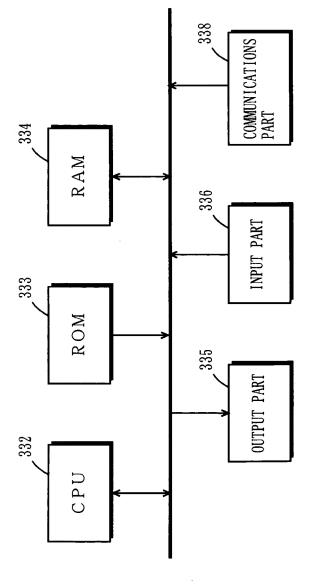
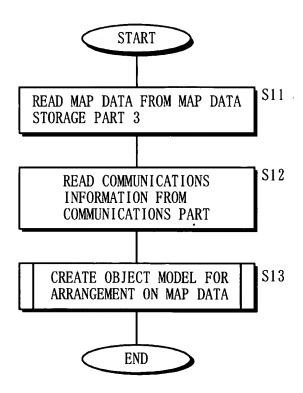


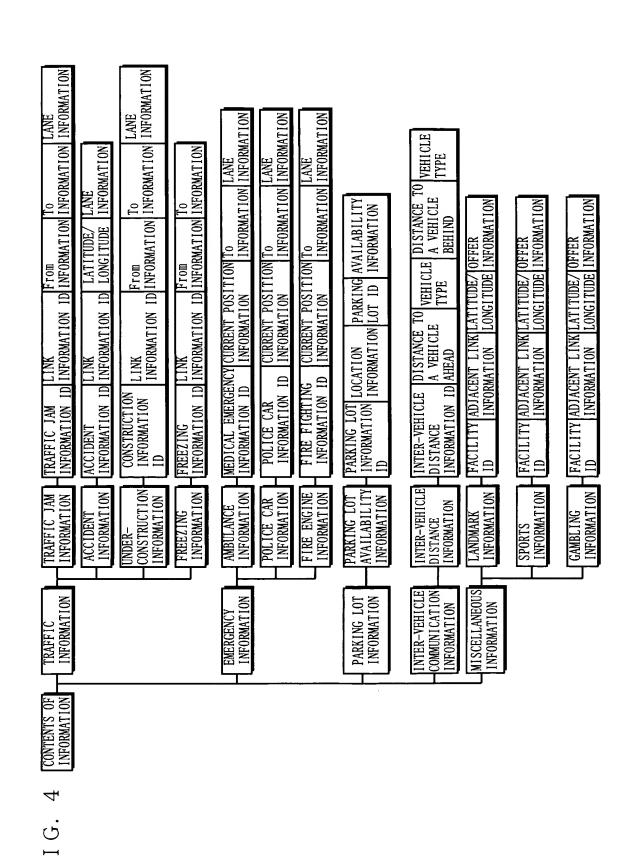
FIG. 2



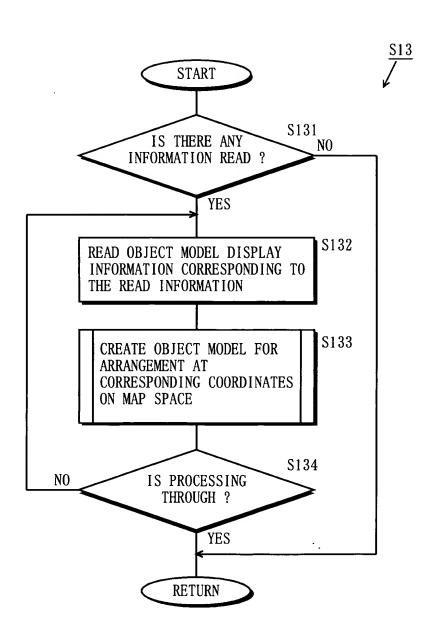
F I G. 3



Щ



F I G. 5



9 FIG.

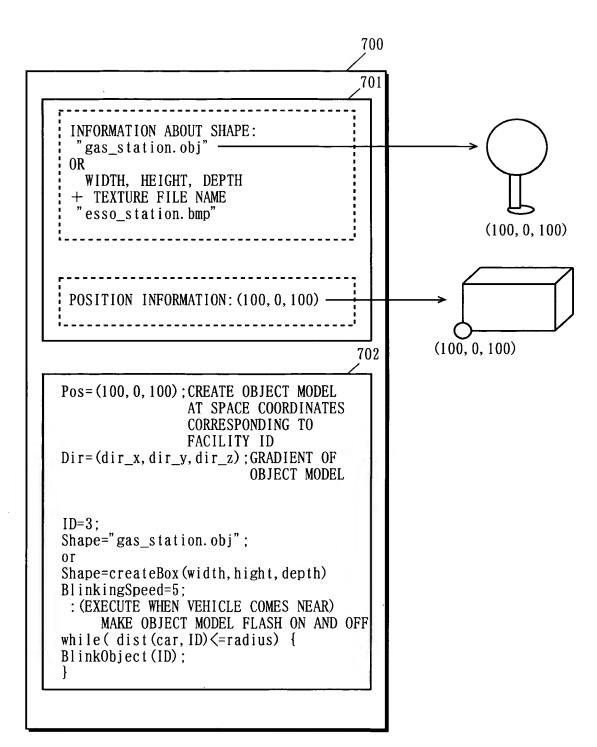
> DISPLAY INFORMATION OBJECT MODEL

1. FUNCTION TO SHAPE AND PARAMETERS THEREFOR INFORMATION ABOUT SHAPE

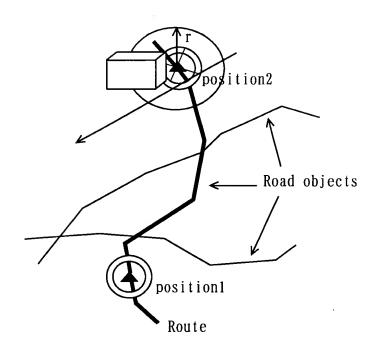
OR 2. SHAPE POLYGON INFORMATION AND TEXTURE INFORMATION

CREATE OBJECT MODEL AT SPACE COORDINATES CORRESPONDING TO FACILITY ID CAR_NEAR: (EXECUTE WHEN VEHICLE COMES NEAR) MAKE OBJECT MODEL FLASH ON AND OFF INFORMATION ABOUT BEHAVIOR IN TIME AND SPACE CREATE: (EXECUTE AT OBJECT MODEL CREATION)

F I G. 7



F I G. 8



F I G. 9

FUNCTION TO PRESENT TRAFFIC JAM INFORMATION

- 1. READ LINK INFORMATION, (From, To) INFORMATION, AND LANE NUMBER CORRESPONDING TO A JAMMED SECTION
- 2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR THE SECTION
- 3. CREATE APPROPRIATE VEHICLE POLYGON AND TRAFFIC JAM SIGN IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE

FUNCTION TO PRESENT ACCIDENT INFORMATION

- 1. READ LINK INFORMATION, LATITUDE/LONGITUDE, AND LANE NUMBER CORRESPONDING TO A PLACE WHERE ACCIDENT OCCURRED
- 2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR THE PLACE
- 3. CREATE APPROPRIATE VEHICLE POLYGON AND ACCIDENT SIGN IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE

FUNCTION TO PRESENT UNDER-CONSTRUCTION INFORMATION

- 1. READ LINK INFORMATION, (From, To) INFORMATION, AND LANE NUMBER CORRESPONDING TO A SECTION UNDER CONSTRUCTION 2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR THE SECTION
- 3. CREATE APPROPRIATE UNDER-CONSTRUCTION POLYGON AND SIGN IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE

FUNCTION TO PRESENT FREEZING INFORMATION

- 1. READ LINK INFORMATION, (From, To) INFORMATION, AND LANE NUMBER CORRESPONDING TO A FROZEN SECTION
- 2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR THE SECTION
- 3. CREATE APPROPRIATE FREEZING POLYGON AND SIGN IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE

F I G. 10

FUNCTION TO PRESENT AMBULANCE INFORMATION

- 1. READ AMBULANCE'S CURRENT POSITION, DESTINATION, AND ROUTE INFORMATION
- 2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR CORRESPONDING SECTION
- 3. CREATE AMBULANCE POLYGON AND SIGN IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE
- 4. DISPLAY AMBULANCE'S ROUTE IN MAP SPACE

FUNCTION TO PRESENT POLICE CAR INFORMATION

- 1. READ POLICE CAR'S CURRENT POSITION, DESTINATION, AND ROUTE INFORMATION
- 2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR CORRESPONDING SECTION
- 3. CREATE POLICE CAR POLYGON AND SIGN IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE
- 4. DISPLAY POLICE CAR'S ROUTE IN MAP SPACE

FUNCTION TO PRESENT FIRE ENGINE

- 1. READ FIRE ENGINE'S CURRENT POSITION, DESTINATION, AND ROUTE INFORMATION
- 2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR CORRESPONDING SECTION
- 3. CREATE FIRE ENGINE POLYGON AND SIGN IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE
- 4. DISPLAY FIRE ENGINE'S ROUTE AND INFORMATION ABOUT A PLACE WHERE FIRE BROKE OUT IN MAP SPACE

FUNCTION TO PRESENT PARKING LOT INFORMATION

- 1. READ POSITION INFORMATION, PARKING LOT ID, AND AVAILABILITY INFORMATION ABOUT PARKING LOT 2. CALCULATE SPACE COORDINATES
- 2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR THE PARKING LOT
- 3. TO DISPLAY AVAILABILITY LEVEL OF THE PARKING LOT AT A GLANCE, CREATE VEHICLE POLYGON AND SIGN ONLY FOR THE AVAILABILITY LEVEL IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE

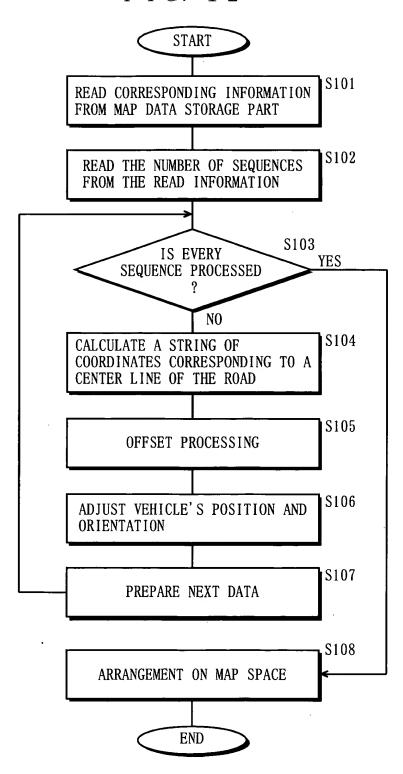
FUNCTION TO PRESENT INTER-VEHICLE DISTANCE INFORMATION

1. READ INTER-VEHICLE DISTANCE FROM/TO VEHICLE AHEAD/BEHIND, AND VEHICLE TYPE THEREOF
2. CALCULATE SPACE COORDINATES FOR DISPLAY ON MAP DATA FOR THE VEHICLES AHEAD AND BEHIND
3. CREATE VEHICLE POLYGON AND SIGN CORRESPONDING TO THE VEHICLES AHEAD AND BEHIND IN INTERMEDIATE BUFFER FOR ARRANGEMENT ON MAP SPACE

F I G. 11

551	552	553	554	555
TRAFFIC JAM INFORMATION ID	TRAFFIC JAM LINK NUMBER	START INTERPOLATION POINT NUMBER	END INTERPOLATION POINT NUMBER	JAMMED LANE NUMBER

F I G. 12



F I G. 13

LINK NUMBER	1010
START INTERPOLATION POINT NUMBER	1
END INTERPOLATION POINT NUMBER	2
THE NUMBER OF SEQUENCES	3
SEQUENCE NUMBER	13
START REFERENCE POINT NUMBER	0
END REFERENCE POINT NUMBER	1
SEQUENCE NUMBER	14
START REFERENCE POINT NUMBER	0
END REFERENCE POINT NUMBER	1
SEQUENCE NUMBER	15
START REFERENCE POINT NUMBER	0
END REFERENCE POINT NUMBER	1

F I G. 14

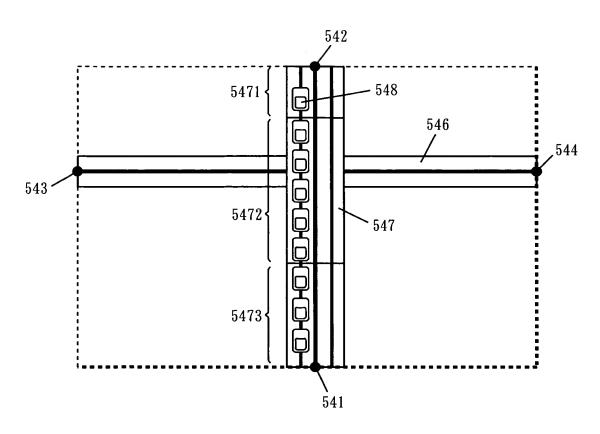
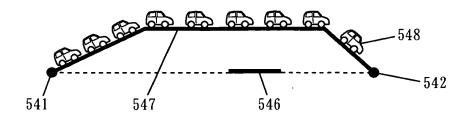


FIG. 15



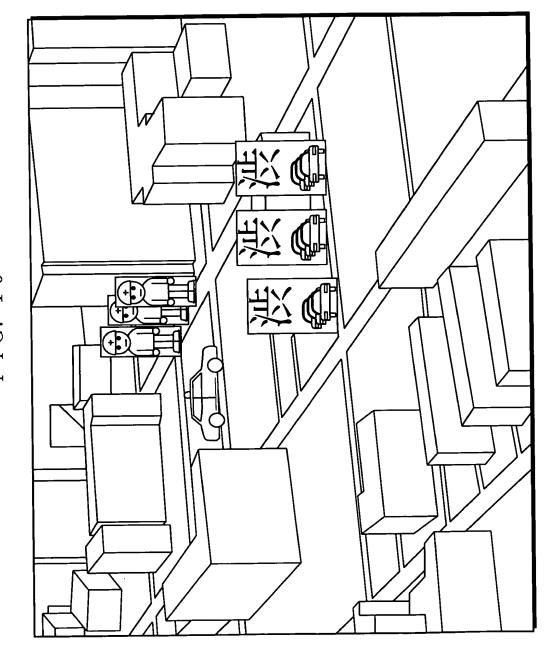
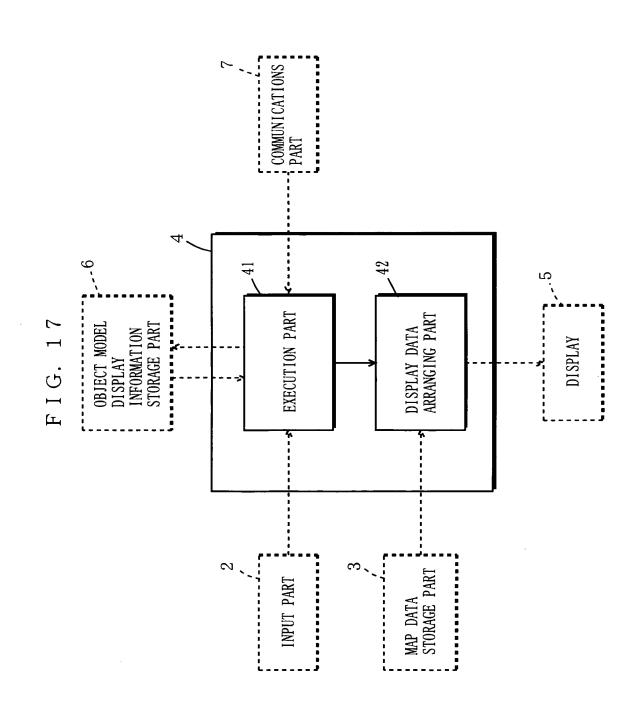
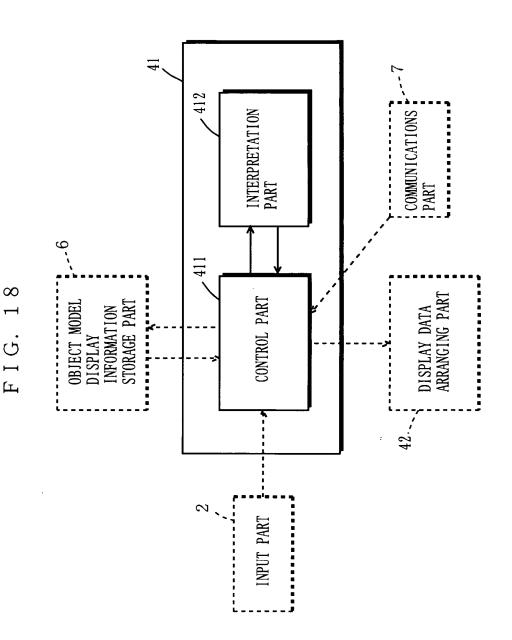
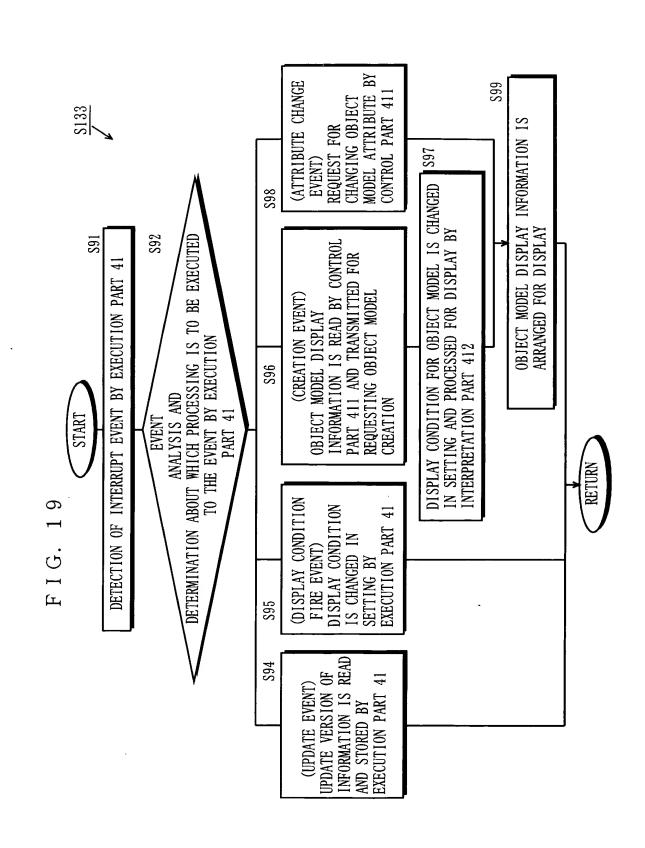


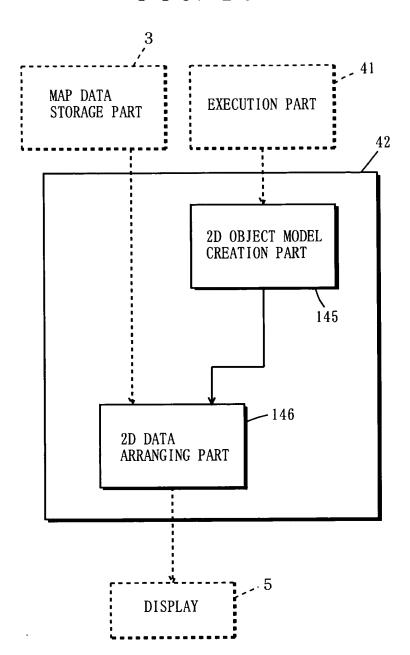
FIG. 16



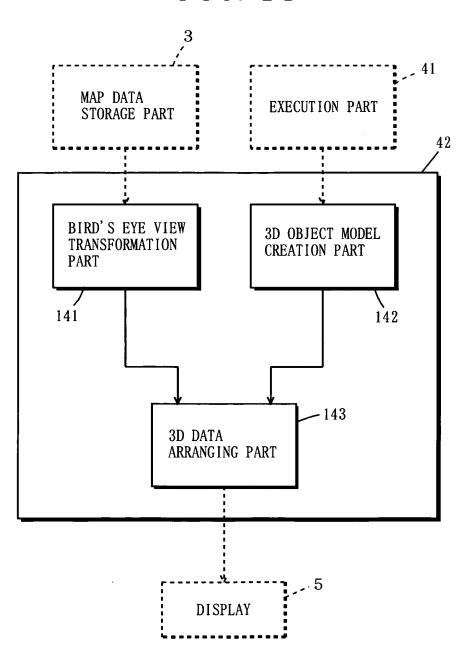




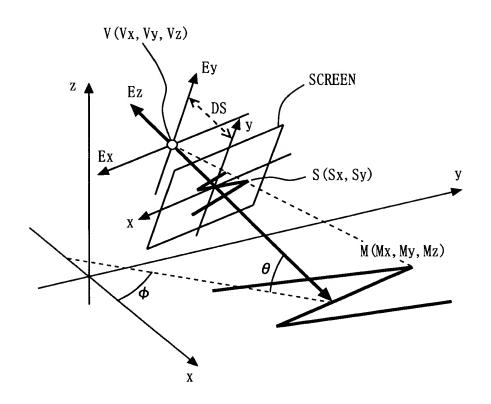
F I G. 20



F I G. 21



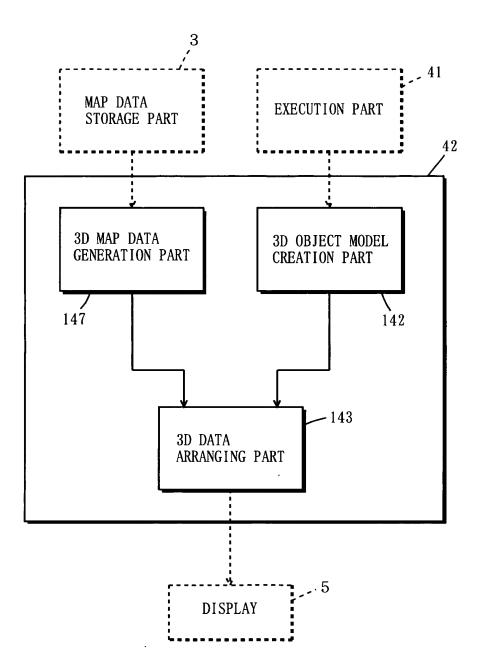
F I G. 22



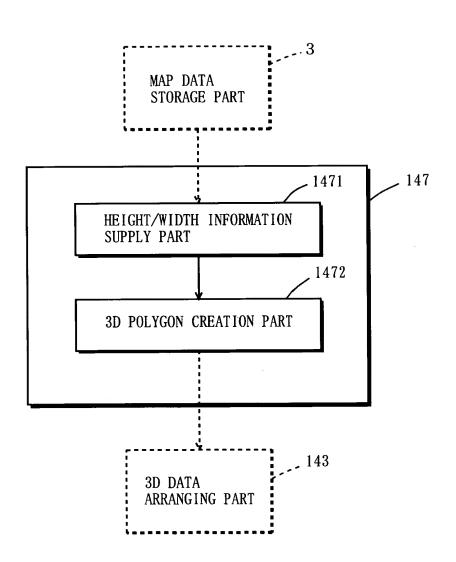
方面 19:31次の分岐((5 Д 緩 8

က 0 FIG.

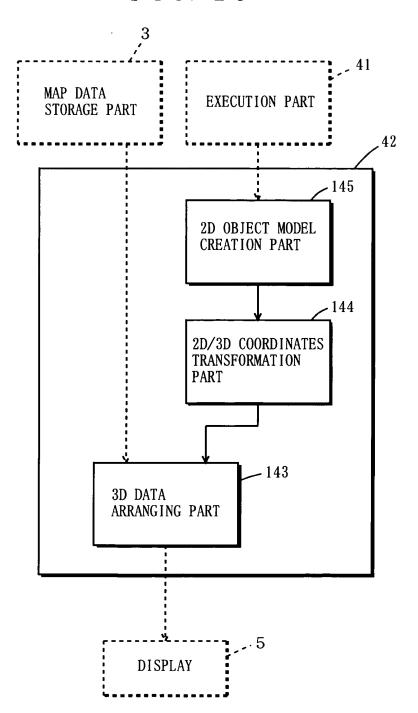
FIG. 24



F I G. 25



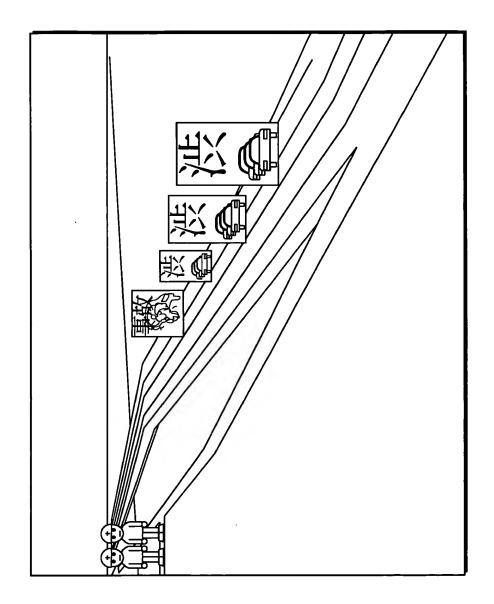
F I G. 26



F I G. 27

	IMAGE FOR CORRESPONDING INFORMATION (DISPLAYED PLURALLY IN 2D)			
	ACCIDENT IMAGE	UNDER- CONSTRUCTION IMAGE	TRAFFIC JAM IMAGE	
LONG- RANGE	"SMarkl.bmp"	"SMark2.bmp"	洪 舎 "SMark3. bmp"	
MEDIUM- RANGE	"MMarkl. bmp"	"MMark2. bmp"	沙 《 "MMark3. bmp"	
CLOSE- RANGE	"LMarkl. bmp"	"LMark2. bmp"	沙人 "LMark3. bmp"	

FIG. 28



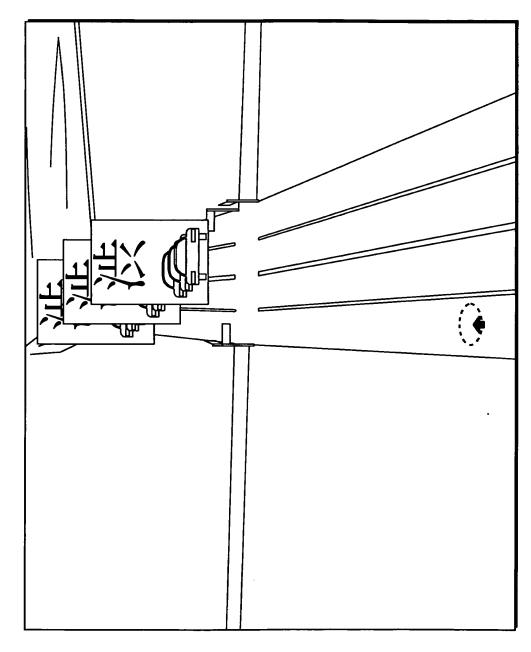
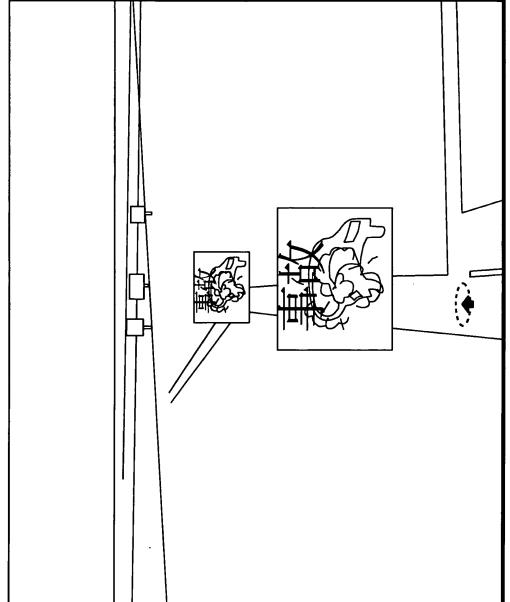


FIG. 29

FIG. 30



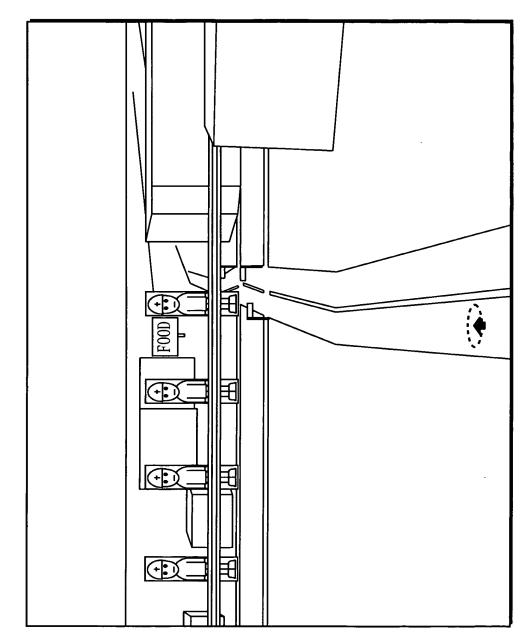
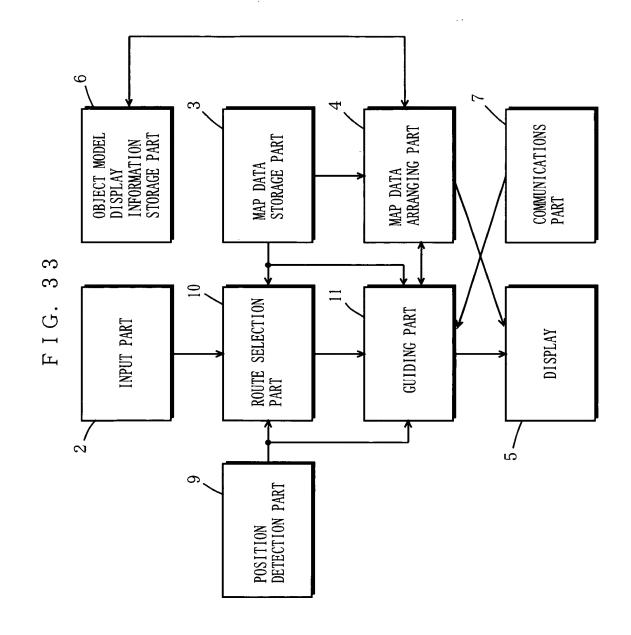
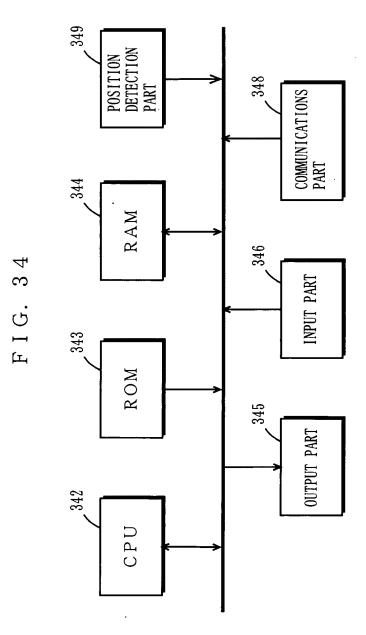


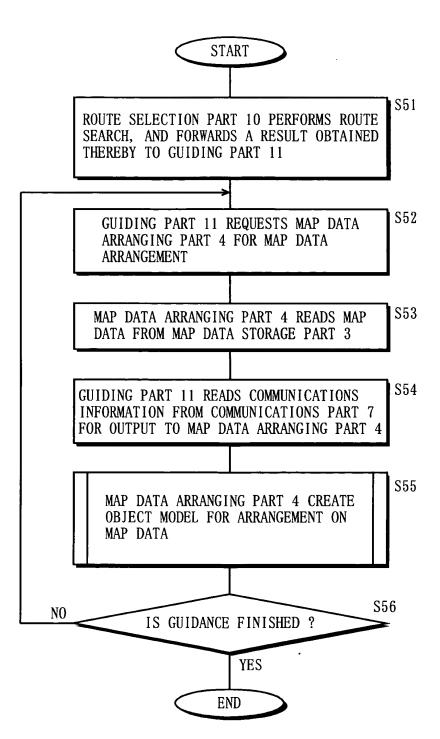
FIG. 31

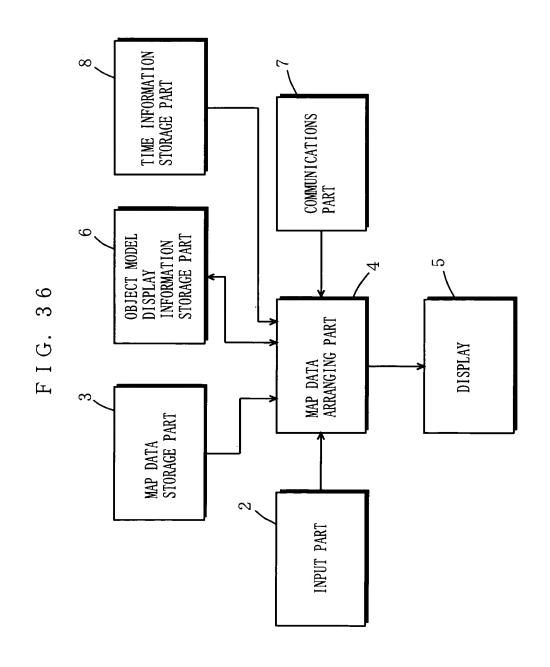
FIG. 32

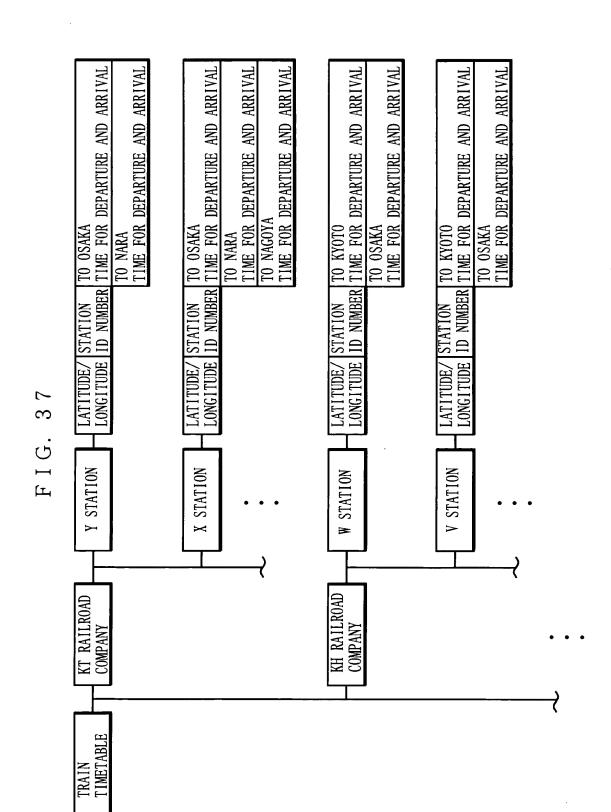




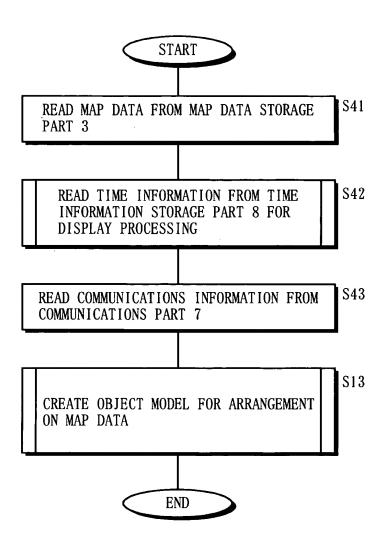
F I G. 35







F I G. 38



F I G. 39

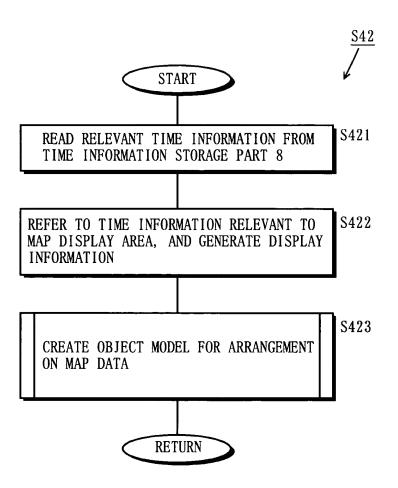
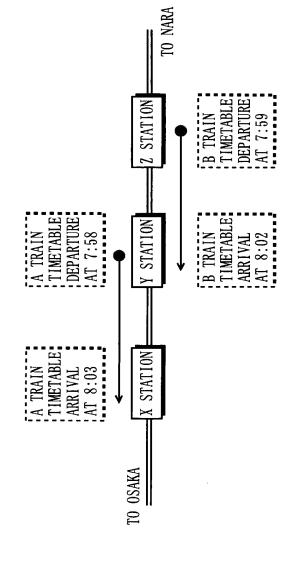
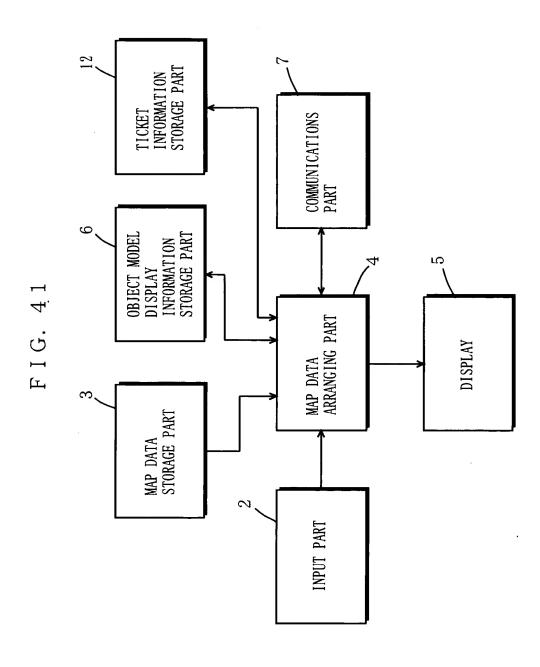
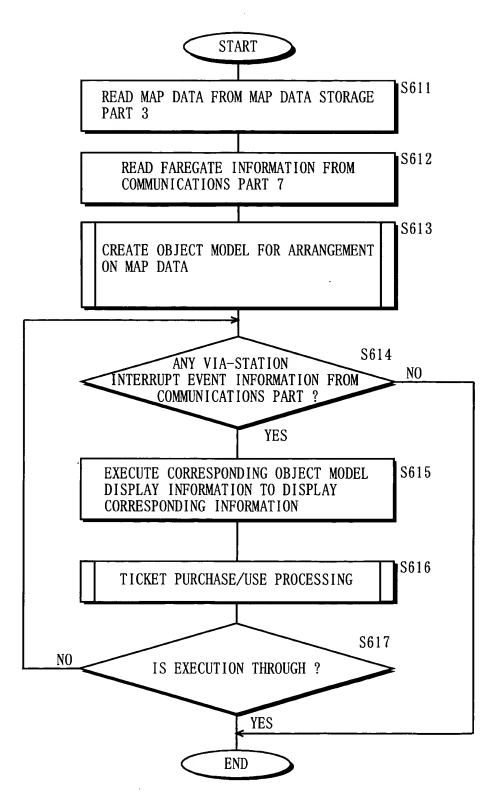


FIG. 40

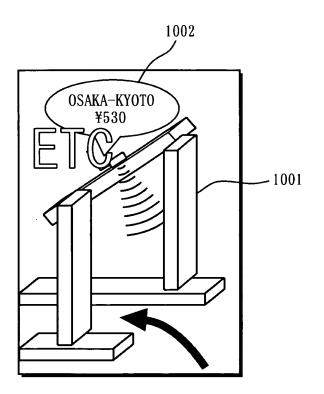




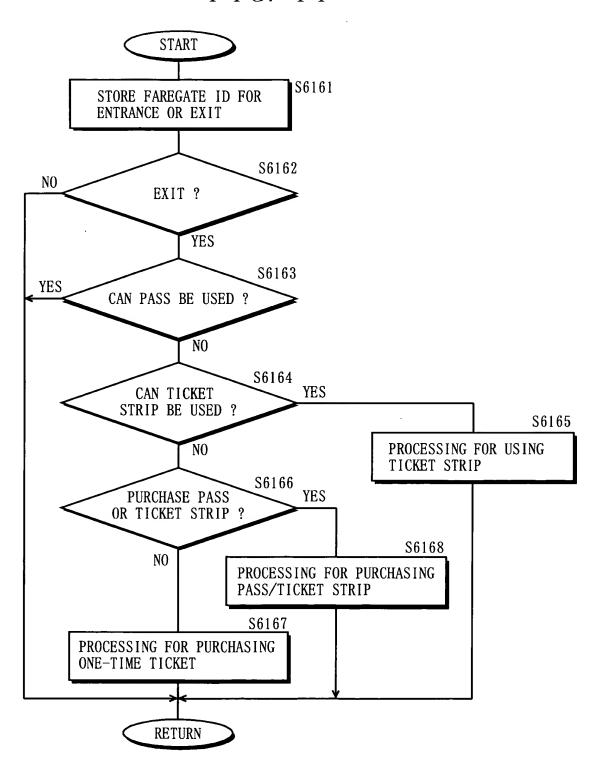
F I G. 42



F I G. 43



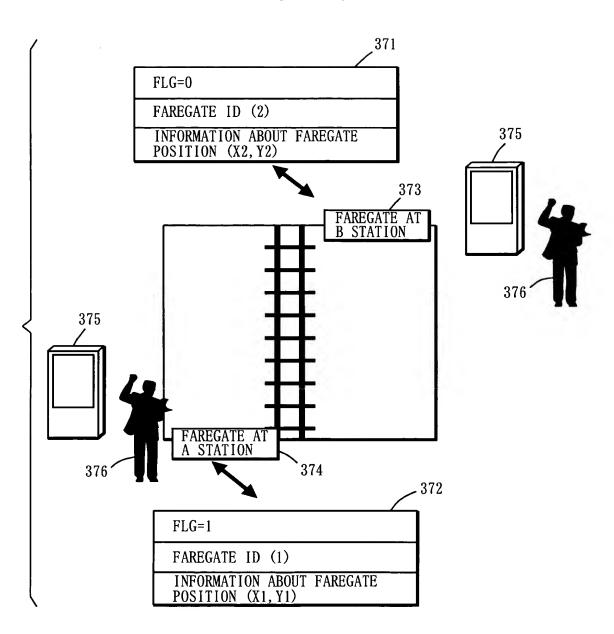
F I G. 44

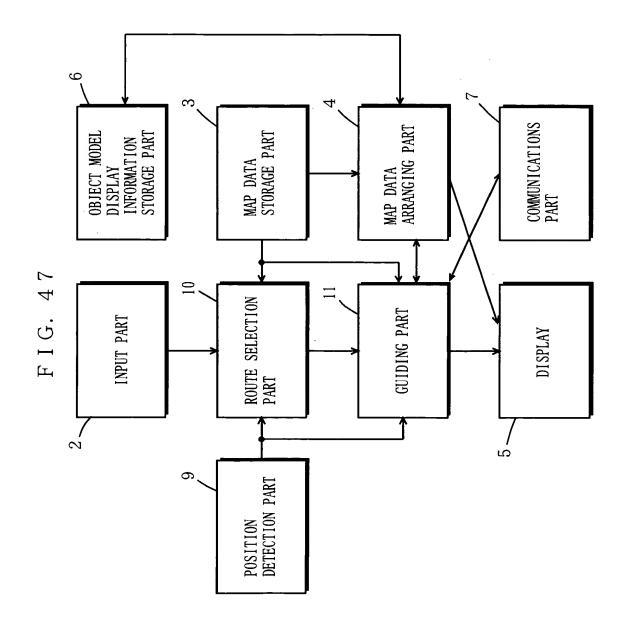


F I G. 45

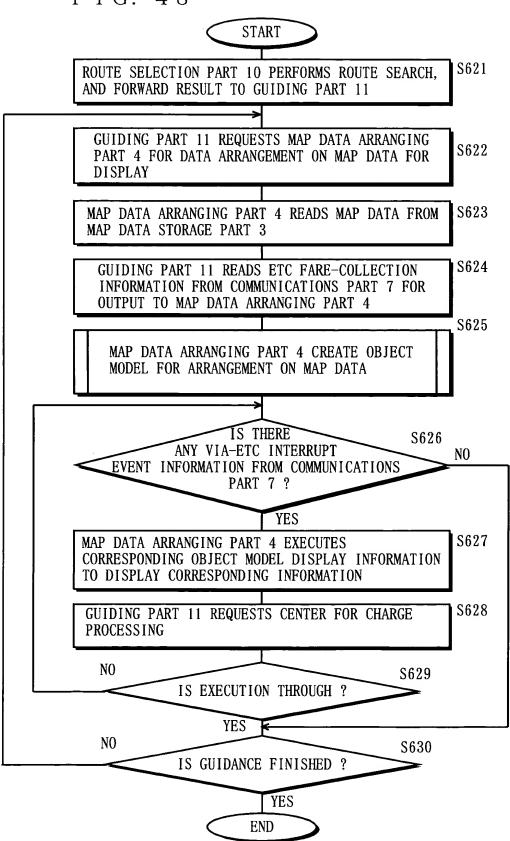
TICKET STRIP ID	ENTRANCE ID 622	EXIT ID 623	FARE 624	THE REMAINED NUMBER OF TIMES 625	├- ⁶²⁰
PASS ID 631	ENTRANCE ID 632	EXIT ID 633	FARE 634	EXPIRATION DATE 635	├ ⁶³⁰

FIG. 46

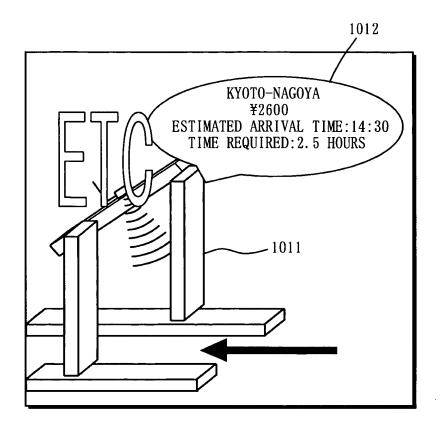




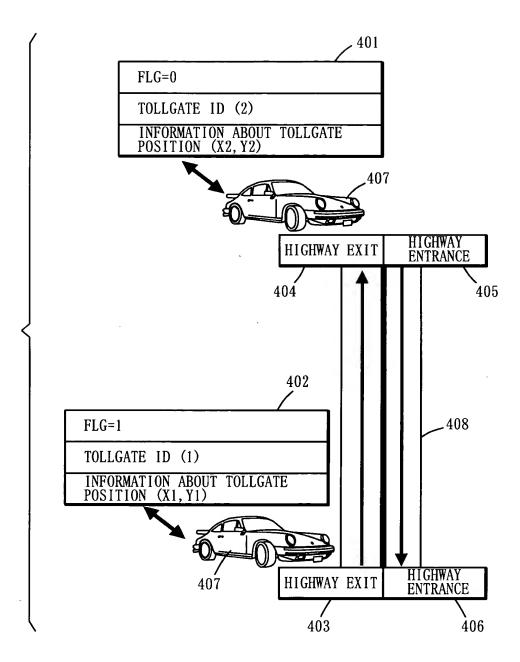
F I G. 48



F I G. 49



F I G. 50



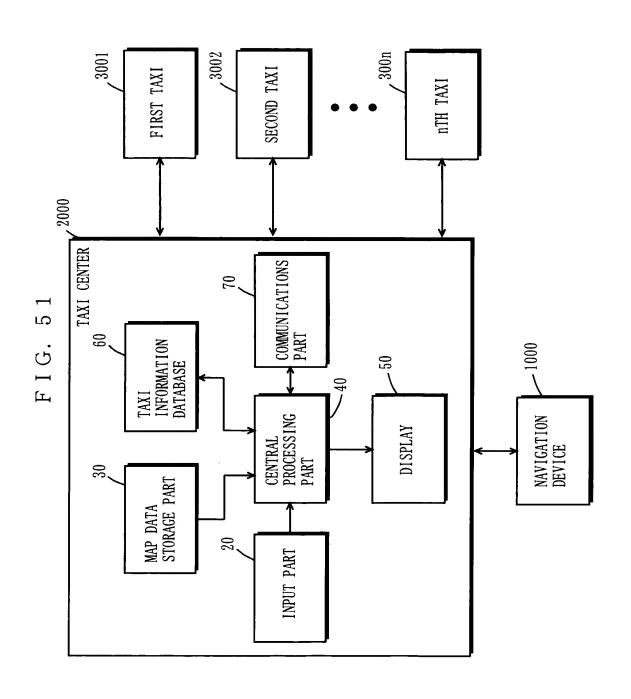
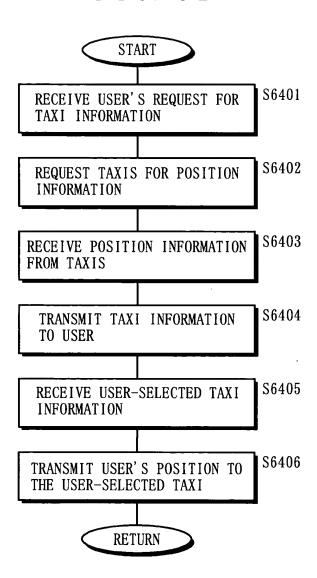


FIG. 52



F I G. 53

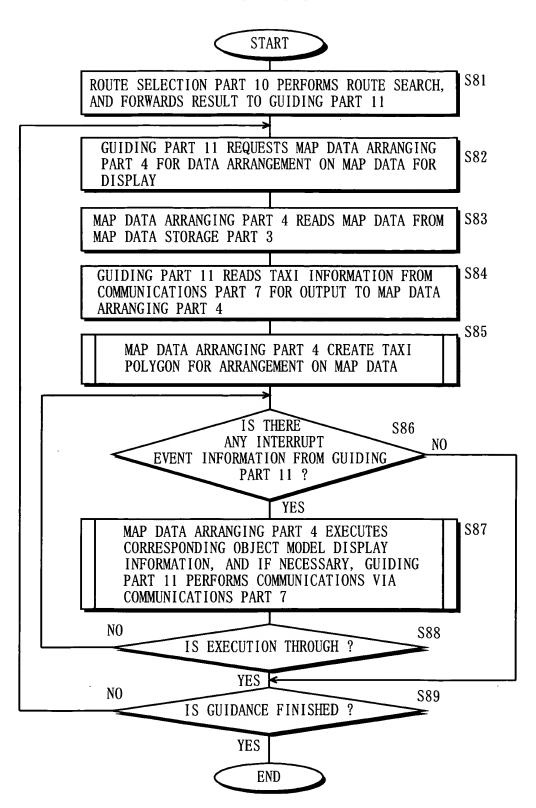


FIG. 54

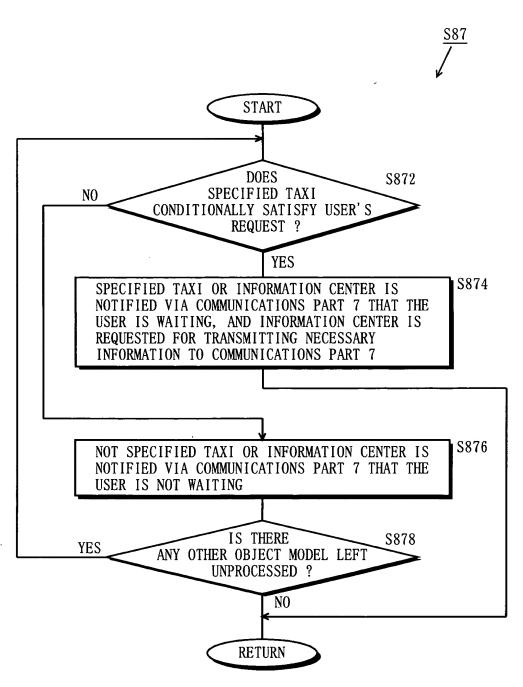


FIG. 55

```
430
INFORMATION ABOUT SHAPE:
"taxi.obj"
0R
  WIDTH, HEIGHT, DEPTH
+ TEXTURE FILE NAME
"taxi.bmp"
POSITION INFORMATION: (0, 0, 0)
                                          432
Pos=(x, y, z); CREATE OBJECT MODEL AT SPACE
            COORDINATES CORRESPONDING TO
            TAXI INFORMATION
Dir=(dir_x, dir_y, dir_z); GRADIENT OF
                         OBJECT MODEL
ID=3:
Shape="taxi.obj";
Shape=createBox (width, hight, depth)
if (user_click_on); USER CLICK-ON
if (object_id);OBJECT MODEL ID MATCHES
              TO CONDITION
 {
    taxi_call; REQUEST GUIDING PART 11 TO
              ORDER TAXI VIA
              COMMUNICATIONS PART 7
if (user_hand_on); PLACE MOUSE ON TAXI
                 POSITION
 {
    information_display; DISPLAY TAXI
      INFORMATION (e.g., FARE) RECEIVED
      VIA COMMUNICATIONS PART 7 AT
      POSITION CORRESPONDING TO TAXI
      DISPLAY POSITION
```

FIG. 56

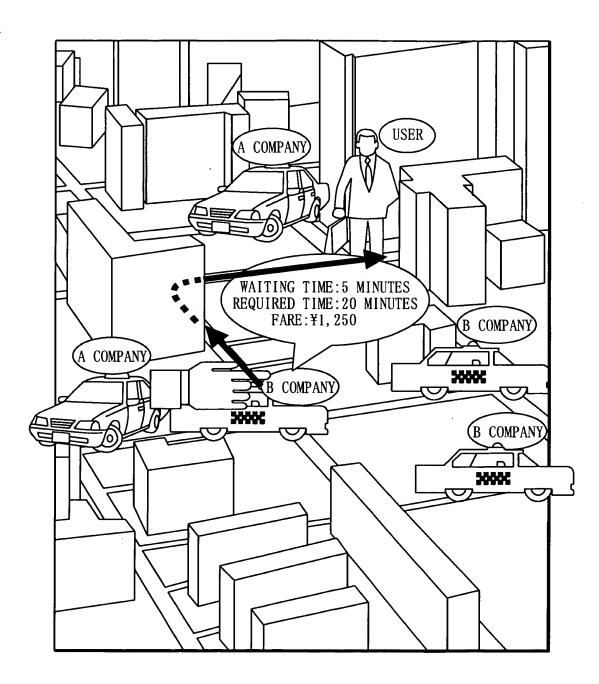
TAXI CALL FUNCTION

1. GUIDING PART 11 ASKS COMMUNICATIONS PART 7 TO OBTAIN TAXI INFORMATION INDICATING WHICH TAXI IS VACANT IN A RANGE CLOSE TO CURRENT POSITION 2. MAP DATA ARRANGING PART 4 IS REQUESTED TO EXECUTE TAXI BJECT MODEL DISPLAY INFORMATION BASED ON THE OBTAINED TAXI INFORMATION (THERE MAY BE A CASE WHERE SMALL-SIZED TAXI OR ANY SPECIFIC TAXI COMPANY IS PRIORITIZED) 3. REPEAT THE ABOVE PROCESSING FOR THE REQUIRED NUMBER OF TIMES 4. MAP DATA ARRANGING PART 4 EXECUTES TAXI OBJECT MODEL DISPLAY INFORMATION SO THAT TAXI POLYGON IS DISPLAYED ON MAP 5. GUIDING PART 11 EXECUTES PROCESSING IF REQUESTED BY MAP ARRANGING PART 4 Taxi_call: ORDER TAXI VIA COMMUNICATIONS PART 7 information_display::

DISPLAY OBTAINED TAXI INFORMATION (e.g., FARE) AT POSITION CORRESPONDING

TO TAXI DISPLAY POSITION

F I G. 57



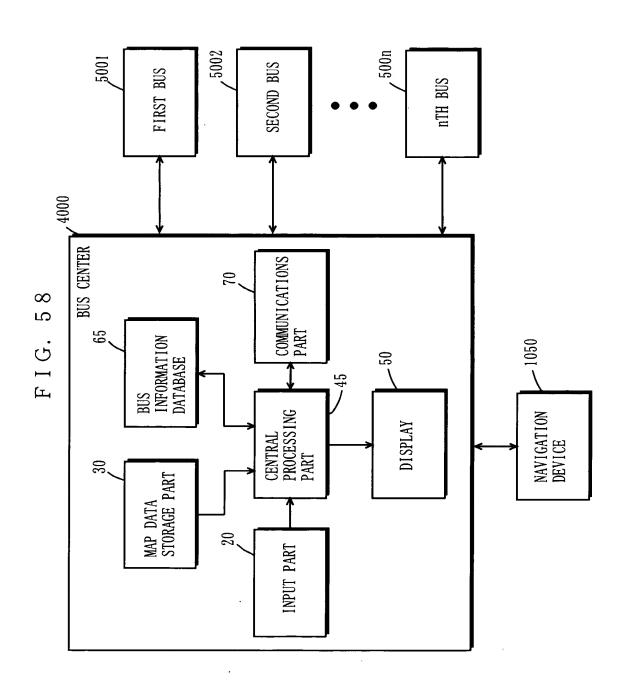
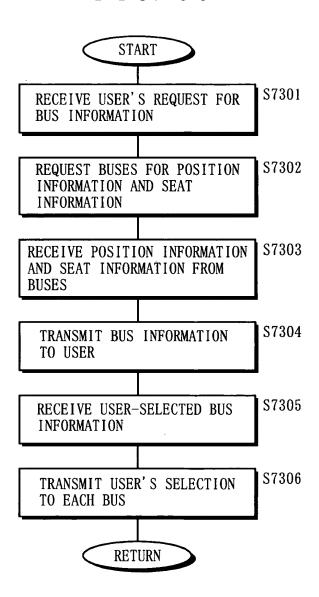
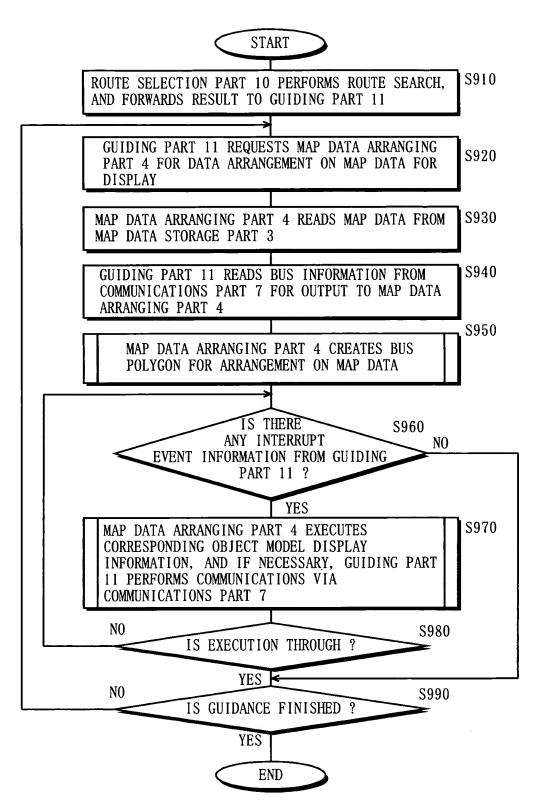


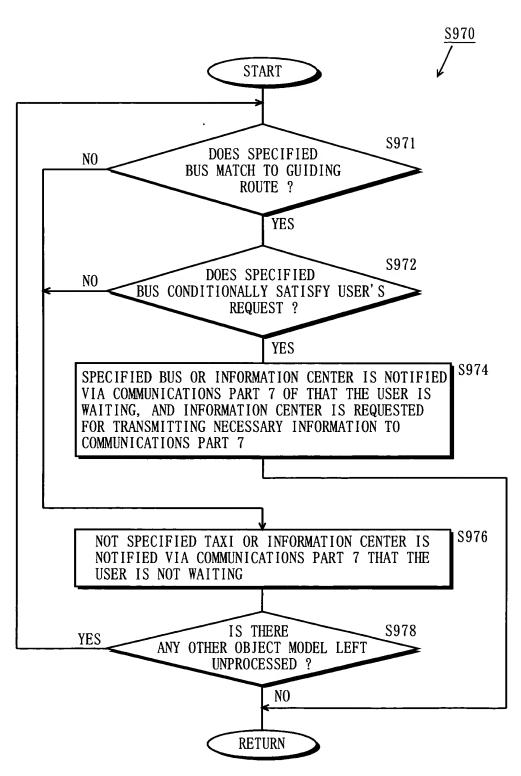
FIG. 59



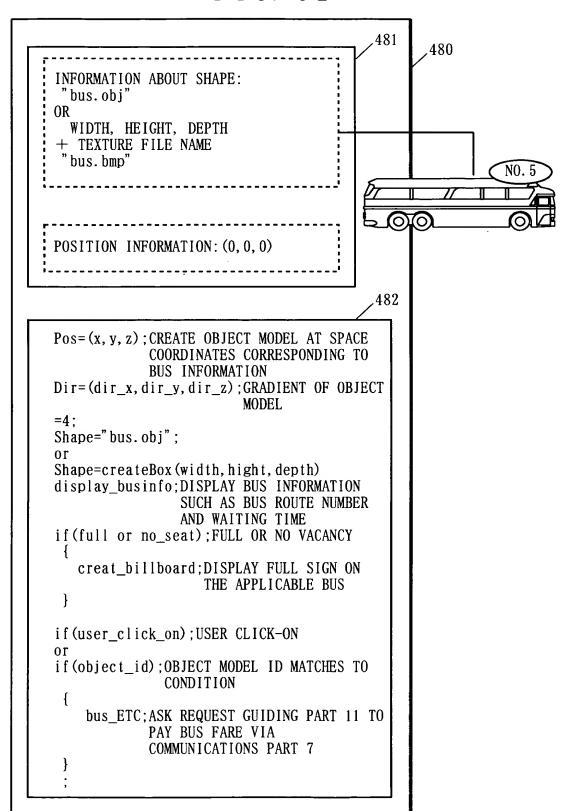
F I G. 60



F I G. 61



F I G. 62



F I G. 63

BUS INFORMATION CONTROL FUNCTION

1. GUIDING PART 11 ASKS COMMUNICATIONS PART 7 TO OBTAIN BUS INFORMATION IN A RANGE CLOSE TO CURRENT POSITION 2. MAP DATA ARRANGING PART 4 IS ASKED TO MARK BUS INFORMATION PASSING THROUGH STOPOVER ON USER'S ROUTE BASED ON OBTAINED BUS INFORMATION, AND TO EXECUTE BUS OBJECT MODEL DISPLAY INFORMATION. IF NECESSARY, INFORMATION IS TRANSMITTED VIA COMMUNICATIONS PART 7 TO BUS (FOR EXAMPLE, BUS NOT PASSING STOPOVER IS NOTIFIED THAT USER IS NOT WAITING VIA COMMUNICATIONS PART 7) 3. REPEAT THE ABOVE PROCESSING FOR THE REQUIRED NUMBER OF TIMES 4. MAP DATA ARRANGING PART 4 EXECUTES BUS OBJECT MODEL DISPLAY INFORMATION SO THAT BUS POLYGON IS DISPLAYED ON MAP 5. GUIDING PART 11 EXECUTES PROCESSING IF REQUESTED BY MAP ARRANGING PART 4 (FOR EXAMPLE, BUS FARE IS PAID VIA COMMUNICATIONS PART 70)

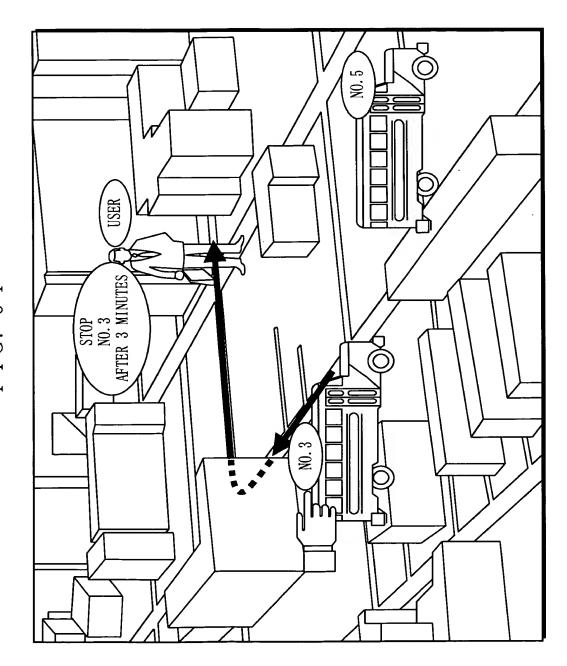


FIG. 64

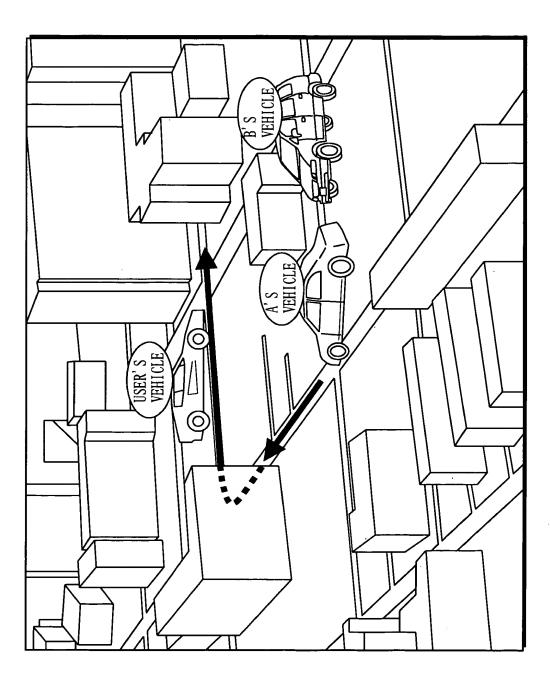


FIG. 65

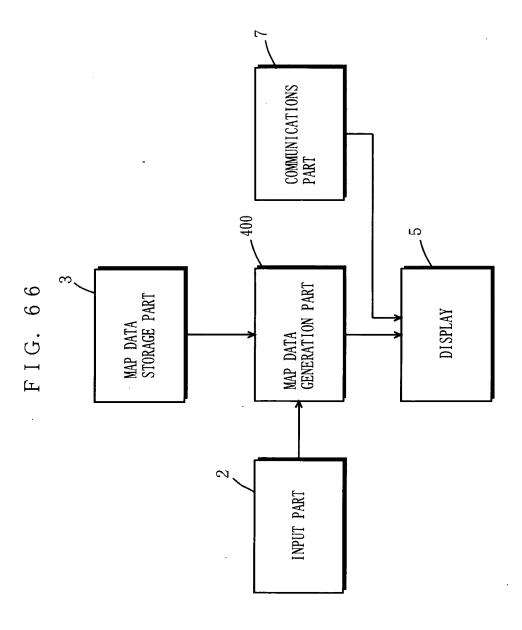


FIG. 67

